# ABSTRACT OF THE DISCLOSURE

The variation of a Voice Low-frequency to High frequency Ratio (VLHR) can be analyzed to determine whether a nasal sound occurs for clinical correction and remedy, or as a reference for voiceprint comparison. The VLHR can be obtained by the following steps of (1) capturing a voice signal and digitally sampling the voice signal; (2) transforming the voice signal into a frequency domain signal by Fourier transformation to obtain the fundamental frequency of the voice signal, which can be obtained by auto-correlation also; (3) multiplying the fundamental frequency by a ratio factor to calculate a divisional frequency so as to divide the frequency band of the voice signal into a low-frequency band and a high-frequency band; (4) respectively adding the powers of the frequencies within the low-frequency band and that of the high-frequency band to calculate the power of the low-frequency band and the power of the high-frequency band; (5) calculating the VLHR, which is the ratio of the power of the low-frequency band to the power of the high-frequency band.